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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.              | CONFIRMATION NO. |
|---|-------------|----------------------|----------------------------------|------------------|
| 10/688,266  | 10/17/2003  | Egas Jose Desousa    | DP-308546                        | 4585             |
| 22851   | 7590        | 03/31/2005           |                                  |                  |
| DELPHI TECHNOLOGIES, INC.<br>M/C 480-410-202<br>PO BOX 5052<br>TROY, MI 48007 |             |                      | EXAMINER<br>TOLAN, EDWARD THOMAS |                  |
|   |             |                      | ART UNIT                         | PAPER NUMBER     |
|   |             |                      | 3725                             |                  |

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/688,266 | <b>Applicant(s)</b><br>DESOUSA ET AL. |  |
|                              | <b>Examiner</b><br>Tolan Edward      | <b>Art Unit</b><br>3725               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Sousa et al. (5,937,516) in view of Irie (6,216,512). De Sousa discloses a method and apparatus for spin forming comprising a carrier (24) rotatable about a spin axis, at least first and second rollers (34,36,38,40,42) that are radially and axially offset from one another (column 3, lines 44-52), a rotational drive mechanism (column 3, lines 53-57) and an axial drive mechanism (column 4, lines 1-25). The axial drive mechanism drives the rollers sequentially against a workpiece (50) until a desired reduction in diameter is achieved (column 4, lines 26-40). De Sousa selects the number of rollers and provides means to axially move them (column 4, lines 49-65). De Sousa does not disclose that the rollers are radially movable and that a pivoting mechanism rotates the carrier or workpiece about a pivot point. Irie teaches a radial drive mechanism (25,26,27) for radially translating rollers toward and away from a spin axis (column 6, lines 50-67 and column 7, lines 1-10). Irie teaches a workpiece on a fixture (12). Irie teaches a pivoting mechanism (15,16,31,32,33) for pivoting the workpiece about a forming axis (xr) in a y-direction from a first angular position (xr) to a second angular position (xt) (column 5, lines 32-46 and column 8, lines 24-36). Irie teaches that it is known to pivot the

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workpiece in a z-direction to offset the workpiece from the forming axis (xr) (column 15, lines 34-44 and column 16, lines 14-44). The workpiece fixture is programmably controlled to pivot between forming passes. It would have been obvious to one skilled in the art at the time of invention to pivot the workpiece and radially move the rollers of De Sousa as taught by Irie in order to produce oblique and offset shapes on the end of tubular workpieces.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Massee (WO 02/07906) and Nakamura et al. (6,823,704) disclose tool carriers that are pivoted and shifted to form complex shapes at the ends of tubular workpieces.

Any inquiry concerning this communication should be directed to Ed Tolan whose telephone number is 571-272-4525.

ED TOLAN  
PRIMARY EXAMINER

